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09/830,029	07/25/2001	Uwe Kolberg	608.0010USU	9397

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EXAMINER

HALPERN, MARK

ART UNIT PAPER NUMBER

1731

DATE MAILED: 05/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/830,029

Applicant(s)

KOLBERG ET AL.

Examiner

Mark Halpern

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- 1) Acknowledgement is made of Amendment received 1/12/2004. Applicants amend claims 7, 13, 15.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 2) Claims 7-14, 21-23, are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Mateika (4,687,646).

Claims 7, 13, 23: Mateika teaches a device for melting/refining glass which is essentially arranged horizontally (Fig. 1, the device is placed on a flat horizontal surface); has an inlet and outlet for the glass melt (Fig. 1, ref. no. 41, and col. 4, lines 2-10, the opening at the top of the crucible serves at the opening and the bottom of the

crucible serves as the outlet); the channel is constructed by having a plurality of metal pipes connected to a cooling medium (Fig. 1, ref. no. 5, col. 2, lines 56-68) and an HF coil being assigned to the channel for input of HF energy to the melt (col. 3, lines 40-51). The glass melt has a flow that is horizontal, or in the least it would have been obvious, to one skilled in the art at the time the invention was made, that the glass melt in the device move in a flow direction that is essentially horizontal.

Claims 8, 14: Mateika teaches that the pipes and HF coil are at an angle to one another (Fig. 1, ref. no. 5 and 3, the HF coil and the pipes are a right angle to one another). This reads on the windings being curved.

Claim 9: Mateika teaches that the pipes are arranged in the direction of flow of the melt (Fig. 1, ref. no. 41, 5, the glass inherently flows counter clockwise in the crucible due to the colder walls and hotter middle portion, thus the glass moves in the same direction as the pipes are arranged. Also, the glass is removed from the bottom of the crucible but introduced through the open top, so the glass moves in the same direction as the pipes are arranged).

Claims 10-12: Mateika teaches the pipes are shunted to one another and arranged in a U-shape to form the cage-like crucible (Fig. 1, ref. no.5, 17, "Distribution Ring", the "Distribution Ring" serves as the shunt and the pipes 5, 17 are in the form of a square U-shape). Mateika also teaches the pipes are joined together for the purpose of forming a shunt (Fig. 1, ref. no. 5 and "Distribution Ring").

Claim 21: Mateika, in Figure 1, shows a second coil 39 positioned apart from the first coil 37 (col. 3, lines 12-56).

Claim 22: Mateika, in Figure 1, shows a cooling conduit with entry of cooling medium 29 and exit of cooling medium 31, also a cooling medium entry at 11 and outlet at 13 (col. 3, lines 1-35).

3) Claims 7-14, 23, are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Wenckus (4,049,384).

Claims 7, 13, 23: Wenckus teaches a device for melting/refining glass which is essentially arranged horizontally (Fig. 2, the device is placed on a flat horizontal surface); has an inlet and outlet for the glass melt (Fig. 2, ref. no. 10, the opening at the top of the crucible serves as both the opening of the crucible and as the outlet); the channel is constructed by having a plurality of metal pipes connected to a cooling medium (Fig. 1 ref. no. 12) and an HF coil being assigned to the channel for input of HF energy to the melt (col. 5, lines 45-50, Fig. 5, ref. no. 81). The glass melt has a flow that is horizontal, or in the least it would have been obvious, to one skilled in the art at the time the invention was made, that the glass melt in the device move in a flow direction that is essentially horizontal.

Claims 8, 14: Wenckus teaches that the pipes and HF coil are at an angle to one another (Fig. 2, ref. no. 81 and 12, the HF coil and the pipes are a right angle to one another). This reads on the windings being curved.

Claim 9: Wenckus teaches that the pipes are arranged in the direction of flow of the melt (Fig. 2, ref. no. 12, 81, the glass inherently flows counter clockwise in the crucible due to the colder walls and hotter middle portion, thus the glass moves in the

same direction as the pipes are arranged. Also, the glass is removed from the top of the crucible, so the glass moves in the same direction as the pipes are arranged).

Claims 10-12: Wenckus teaches the pipes are shunted to one another and arranged in a U-shape to form the cage-like crucible (Fig. 1, ref. no. 12, 14, the distribution bustle 14 serves as the shunt and the pipes 12 are in the form of a square U-shape). Wenckus also teaches the pipes are joined together for the purpose of forming a shunt (Fig. 1, ref. no. 12 and 14).

4) Claims 7-14, 23, are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sobelev (FR 2768257).

Claims 7, 13, 23: Sobelev teaches a device for melting/refining glass which is essentially arranged horizontally (Fig. 5, the device is placed on a flat horizontal surface); has an inlet and outlet for the glass melt (Fig. 5, ref. no. 30, 2, the opening at the top of the crucible serves as the opening of the crucible and the tube 2 serves as the outlet); the channel is constructed by having a plurality of metal pipes connected to a cooling medium (Fig. 5, ref. no. 21) and an HF coil being assigned to the channel for input of HF energy to the melt (Fig. 5, ref. no. 35). The glass melt has a flow that is horizontal, or in the least it would have been obvious, to one skilled in the art at the time the invention was made, that the glass melt in the device move in a flow direction that is essentially horizontal.

Claims 8, 14: Sobelev teaches that the pipes and HF coil are at an angle to one another (Fig. 5, ref. no. 21 and 35, the HF coil and the pipes are a right angle to one another). This reads on the windings being curved.

Claim 9: Sobelev teaches that the pipes are arranged in the direction of flow of the melt (Fig. 5, ref. no. 21, 2, 30, the glass inherently flows counter clockwise in the crucible due to the colder walls and hotter middle portion, thus the glass moves in the

same direction as the pipes are arranged. Also, the glass is removed from the bottom of the crucible, so the glass moves in the same direction as the pipes are arranged).

Claims 10-12: Sobelev teaches the pipes are shunted to one another and arranged in a U-shape to form the cage-like crucible (Fig. 5, ref. no. 21, 25, the distribution ring 25 serves as the shunt and the pipes 21 are in the form of a square U-shape). Sobelev also teaches the pipes are joined together for the purpose of forming a shunt (Fig. 5, ref. no. 21 and 25).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5) Claims 7-22, are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 15-22, of copending Application No. 09/807,945. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 7 of the present application recites "a device for melting or refining a glass melt comprising a channel having an inlet and an outlet for the glass melt, said channel being arranged so that the

glass melt has a flow that is essentially horizontal and having a plurality of metal pipes that can be connected to a cooling medium; and an HF coil being assigned to said channel for input of HF energy into the glass melt”, and present claim 11 recites “wherein said plurality of metal pipes are configured in a U shape and are arranged ...,so that said plurality of metal pipes from a cage-type skull channel which is open at the top”. Present claim 13 recites “ a device for refining a melt, comprising: a channel having a first side, a second side, and an open top, said channel for the channeling the melt in a horizontal flow direction; and a first coil for input of energy into the melt, said first coil having a plurality of windings being positioned about said channel so that each winding in said plurality of windings runs in said horizontal flow direction... but not across said open top”. Said present claims are not patentably distinct from claim 15 of application 09/807,945, which recites “a device for melting or refining of glasses or glass ceramics comprising: a plurality of pipes forming a U-shape and lying next to one another so that said plurality of pipes from a cage-type skull channel having an open top, said plurality of pipes being able to be connected to a cooling medium, said cage-type skull channel for channeling a melt of the glasses or glass ceramics is a substantially horizontal flow direction; and a high-frequency oscillation circuit having an induction coil, said induction coil being disposed about a portion of said cage-type skull channel such that said open top is free of said induction wall”. Present claims 15-20 disclose “a second heating device” which is not patentably distinct from “an additional heating device” recited in claim 22 of application 09/807,945.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Amendment

6) Claims 7-23, rejection under 35 U.S.C. 112, first paragraph, is withdrawn in view of applicants' argument.

7) Applicants' arguments filed 1/12/2004, have been fully considered but they are not persuasive.

Applicants allege that amendment of claims 7, and 13 reciting that the channel is arranged so that the glass melt has a flow direction that is essentially horizontal to allow for continuous operation of the device differentiates the claimed device over cited prior art, Mateika, Wenckus and Sobelev.

Examiner responds that the present claims are apparatus claims and the claims "horizontal flow" aspect is a method limitation and not a structural limitation and thus no patentable weight has been assigned to the claimed "horizontal flow".

Conclusion

8) **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Halpern whose telephone number is 571-272-1190. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin, can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1700.

MH

Mark Halpern
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Art Unit 1731


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